

REMARKS/ARGUMENTS

Reconsideration and allowance of the above-identified application is respectfully requested.

The inventorship of the current claims remains the same as the original claims.

Claims 1-3, 6-8, 12-14, 16-24, 71 and 72 are rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. The Examiner states that the claims contain subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The Examiner also states that the Applicant does not describe the genus of claimed plants or parts thereof or any related structural feature of the AHAS1 and AHAS3 mutant that produces the claimed function of herbicide tolerance.

Applicant has described a method of making the claimed plants which can be readily followed by one skilled in the art, and has also provided structure in the form of deposits of seeds containing the claimed mutations. One of skill in the art can use the deposited seeds or can use the described methods to develop the claimed plants or plant parts. Using the deposits and/or the methods described requires only routine experimentation to obtain the claimed plants or plant parts.

The Examiner states that the Applicant does not describe any related structural feature of the AHAS1 and AHAS3 mutant that produces the claimed function or herbicide tolerance.

It is respectfully submitted that structural features are indeed provided in the deposited seeds.

The Examiner further states:

Hence, it is unclear that Applicant was in possession of the invention as broadly claimed. See also, MPEP § 2163 which states that the claimed invention as a whole may not be adequately described where an invention is described solely in terms of a method of its making coupled with its function and there is not described or art-recognized correlation or relationship

between the structure of the invention and its function. A biomolecule sequence described only by a functional characteristic, without any known or disclosed correlation between the structure of the invention and its function. A biomolecule sequence described only by a functional characteristic, without any known or disclosed correlation between that function and the structure of the sequence, normally is not a sufficient identifying characteristic for written description purposes, even when accompanied by a method of obtaining the claimed sequence. See *Vas-Cath Inc. v. Mahurkar* 1991 (CAFC) 19 USPQ 2d 1111, 1115, which teaches that the purpose of the written description is for the purpose of warning an innocent purchaser, or other person using a machine, of his infringement of the patent; and at the same time, of taking from the inventor the means of practicing upon the credulity or the fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification.

As noted above the deposits provide the necessary structure and the subsequent correlation of the structure to the function. Applicant has provided much more than just a desired function. Applicant has provided both the structure and function by means of deposits and a detailed method for producing and identifying the claimed plants and plant parts.

With regard to warning an innocent purchaser, identification of the claimed plants can readily be determined by spraying the plants with a level of herbicide that prevents or inhibits growth of a wild-type *Brassica juncea* plant. The test is far easier than a molecular test, which is beyond the realm of the average purchaser of the seed.

Claims 1-3, 6-8, 12-14, 16-24, 71 and 72 are rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement.

The Examiner states that Applicant does not teach the genus of claimed plants or parts thereof, or how to make such plants without undue trial and error experimentation.

The Examiner notes that Swanson *et al.* disclose that the AHAS3 gene on the A genome alone will provide tolerance to the usual field rate of herbicide and that without the type of molecular information regarding the *B. juncea* AHAS gene sequences provided by the invention of YAO *et al.* there would be no way to confirm that the mutated AHAS1 gene from *B. napus* was successfully transferred to *B.*

juncea. The Examiner continues by saying that the mutated AHAS1 and AHAS3 genes together will act additively to provide enhanced tolerance to imidazolinone herbicides, this will not be apparent at the herbicide rate disclosed by Gingera et al. See Yao *et al.*

On page 4, paragraph 0057, Yao *et al.* disclose that selection of herbicide resistant individual plants at each generation is accomplished by spraying the imidazolinone herbicide Odyssey at a rate of 42g of the active ingredient per hectare. Thus, Yao *et al.* acknowledge that plants can be selected by application of herbicide, as disclosed in the present application.

The appropriate rate of herbicide application for selection of the present claimed plants can be readily determined by those skilled in the art.

Applicant discloses that under rates used in the field and greenhouse, plants containing single AHAS1 tolerance did not die, but are severely stunted, grow multiple racemes and are very late to flower and mature. In our normal screening program, we discarded these individuals. Accordingly, both AHAS1 and AHAS3 mutant genes appear to be required for the levels of tolerance evaluated in these experiments, see bottom of page 8 and top of page 9 of the present application.

Based on the disclosure provided in the present application, one skilled in the art of plant breeding can readily determine the appropriate rate of herbicide application for selection of the present claimed plants from a segregating population.

The confirmation by Yao et al. that the techniques taught in the present application can be used by others clearly demonstrates that the present application is enabled for identifying the claimed plants without molecular information. Molecular information is a useful breeding tool for efficiently developing commercial lines, but is not essential to the development of the present claimed plants. Should one choose to use molecular information, such information can be determined by one of ordinary skill in the art.

The test for enablement is not whether experimentation is necessary, but rather if experimentation is necessary, whether it is undue. *In re Angstadt*, 198 USPQ 214, 219 (C.C.P.A. 1976). A considerable amount of experimentation is

permissible if it is merely routine, or if the specification provides a reasonable amount of guidance in which the experimentation should proceed.

In the present case, the experimentation required is routine and has been well described in the specification. The specification provides working examples of the invention as well as deposits which enable the claimed plants. The skill in the art is high and the claims are commensurate in scope with the disclosure in the specification and the deposits.

When determining the quantity of experimentation necessary, the focus is not on the amount of experimentation necessary to practice the entire genus, but the amount of experimentation required to practice any particular member. This concept is the central holding of *In re Wands* where the claims read on the use of any IgM antibody that possessed a particular binding affinity.

The *Wands* court recognized that it would require an infinite amount of experimentation to obtain every single possible IgM antibody that could be generated with the specified affinity. Accordingly, the court focused on the amount of experimentation necessary to practice any particular IgM antibody with the recited binding affinity and not the amount of experimentation required to practice the entire genus.

The question then becomes how much experimentation is required to create the present claimed invention. Applicants submit that no more than routine experimentation is required. This may be accomplished by the methods within the present application and within the technical, scientific skill in the art.

Applicants assert the present invention is disclosed in a way that one skilled in the art will be able to practice it without an undue amount of experimentation. *In re Borkowski*, 422 F.2d 904, 908, 164 USPQ 642, 645 (CCPA 1970). Applicants submit that they have fully described the present invention as claimed by teaching both how to make and how to use the invention in a manner commensurate in scope with the claims.

Claims 1-3, 6-8, 12-14, 16-24, 71 and 72 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of US Pat. No. 6,613,963.

Applicant respectfully traverses the rejection, however, in the interest of expediting prosecution, a terminal disclaimer is provided.

In view of the above comments and terminal disclaimer, withdrawal of the current rejections and allowance of the present claims is respectfully requested.

Respectfully submitted,

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